M1 series
Moulded Case Circuit Breaker

Application

M1 Series moulded case circuit breaker is one of products developed and manufactured by adopting international advanced technology. It is supplied with rated insulating voltage up to 800V and used for circuit of AC 50/60Hz, rated operating voltage AC 400(or below), rated operating current up to 1600A for infrequent changing over and starting of the motors. The products conform to IEC60947-2 standard.

Main Technical Specification

Type	Rated current (A)	Pole	Rated insulating volt (V)	Rated operating volt (V)	Arcing-over distance (mm)	Ultimate short circuit breaking capacity(kA)	Service short circuit breaking capacity (kA)	Operation performance		Utilization cat.
								Load	Unload	
M1-63L	10, 16, 20, 25 32, 40, 50, 63	3, 4	690V	400V	0	25	18	2000	10000	A
M1-63M					0	50	35			
M1-125L	16, 20, 25, 32 40, 50, 63, 80 100, 125	2,3, 4	690V	230V(2P) 400	0(≤50)	35	22			
M1-125M					0(≤50)	50	35			
M1-125H		3, 4	690V	400V	0(≤50)	85	50			
M1-250L	100, 125, 140 160, 180, 200 225, 250	2,3, 4	690V	230V(2P) 400	≤50	35	22			
M1-250M					≤50	50	35			
M1-250H		3, 4	690V	400V	≤50	85	50			
M1-400L	225, 250, 315 350, 400	3, 4	690V	400V	≤50	50	35			
M1-400M					≤100	65	42			
M1-400H					≤100	100	65			
M1-630L	400, 500, 630				≤100	50	35	1000	5000	
M1-630M					≤100	65	42			
M1-630H					≤100	100	65			
M1-800M	630, 700, 800				≤100	75	50			
M1-800H					≤100	100	65			
M1-1250M	800, 1000, 1250	3	690V	400V	≤120	75	50	1000	2000	
M1-1250H	800, 1000, 1250				≤120	100	65			
M1-1600H	1000, 1250, 1400 1600				≤120	100	65			

Note:
The N line of four poles breaker is at the right side of the product which has four types:
Type A: N line doesn't have over-current protection, N line can't be opened.
Type B: N line doesn't have over-current protection, N line can be opened.
Type C: N line has over-current protection, N line can be opened
Type D: N line has over-current protection, N line can't be opened.

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Protection Characteristic

The thermodynamic release of a circuit breaker provides the feature of inverse time-delay, while the magnetic release is the instantaneous operation as showed on the following tables.

Distribution Circuit Breaker

Rated current of release (A)	Thermodynamic release (ambient temperature land +40℃ marine +45℃)		Operating current of magnetic release (A)
	1.05In (cold state) non-tripped time (h)	1.30In (hot state) tripped time (h)	
10≤In≤63	≥1	<1	10In±20%
63<In≤125	≥2	<2	
125<In≤800	≥2	<2	5In±20% 10In±20%
1250, 1600	≥2	<2	4In±20% 7In±20%

Motor Protection Circuit Breaker

Rated current of release (A)	Thermodynamic release (ambient temperature land +40℃ marine +45℃)				Operating current of magnetic release (A)
	1.0In (cold state) non-tripped time (h)	1.2In (hot state) tripped time (h)	1.5In (hot state) tripped time	7.2In (cold state) tripped time	
10≤In≤250	≥2	<2	≤4min	4s<Tp≤10s	12In±20%
250<In≤1600			≤8min	6s<Tp≤20s	

Outline and Installation Dimensions

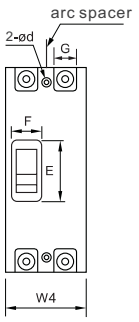
Type	Outline Dimensions (mm)																															Installtion Dimensions		
	Front Panel Connection																	Back Panel Connection					Plug-in connection											
	w	w1	L	L1	W4	H	H1	H2	H3	H4	C	D	E	F	G	W2	W3	L3	H5	H6	ΦD	M	L5	L6	H7	H8	H9	H10	J	K	Φd1	M1	A	B	Φd
M1-63L	76	50	135	154		73.5	90.5	19.5	7	4	85	26	48	22	14	103	75	117	25	49.5	6.5	M6	100	135	27.5	36	43	8	60	50.5	5.5	M5	25	117	3.5
M1-63M	76	50	135	154		81	98.5	27.5	7	4	85	26	48	22	14	103	75	117	25	49.5	6.5	M6	100	135	27.5	36	43	8	60	50.5	5.5	M5	25	117	3.5
M1-125L	91	60	150	199	65	69	86	24	7	4	88	32.5	58	22.5	17	121	90	132.5	68	102	24	M8	92	168	50	65	77	14	56	60	6.5	M8	30	129	4.5
M1-125M	91	60	150	199	65	86	104	24	7	4	88	32.5	58	22.5	17	121	90	132.5	68	102	24	M8	92	168	50	65	77	14	56	60	6.5	M8	30	129	4.5
M1-125H	91	60	150	199		86	104	24	7	4	88	32.5	58	22.5	17	121	90	132.5	68	102	24	M8	92	168	50	65	77	14	56	60	6.5	M8	30	129	4.5
M1-250L	106	70	165	230	75	86	110	24	4.5	3.5	102	31.5	58	25	17.5	141	105	144	76	110	24	M10	94	185	50	68.5	86.5	14	54	70	6.5	M8	35	126	5
M1-250M	106	70	165	230	75	104	127	24	5	4.5	102	31.5	50	22	17.5	141	105	144	73	110	24	M10	94	185	50	68.5	86.5	14	54	70	6.5	M8	35	126	5
M1-250H	106	70	165	230		104	127	24	5	4.5	102	31.5	50	22	17.5	141	105	144	73	110	24	M10	94	185	50	68.5	86.5	14	54	70	6.5	M8	35	126	5
M1-400L	148	96	256	356		105	155	38	8	6	128	64.5	89	65	32.5	196.5	144	224	66	102	24	M12	170	279	60	84	105.5	18.5	129	60	8.5	M12	44	194	7
M1-400M	148	96	256	356		105	155	38	8	6	128	64.6	89	65	32.5	196.5	144	224	66	102	24	M12	170	279	60	84	105.5	18.5	129	60	8.5	M12	44	194	7
M1-400H	180	116	270	370		111.5	160	40	8	7	134	69.5	89	65	44.5	238.5	173.5	234.5	68	124	24	M16	170	299	60	92	112	20	123	100	8.5	M12	58	200	7
M1-630L	180	116	270	370		111.5	160	40	8	7	134	69.5	89	65	44.5	238.5	173.5	234.5	68	124	24	M16	170	299	60	92	112	20	123	100	8.5	M12	58	200	7
M1-630M	180	116	270	370		111.5	160	40	8	7	134	69.5	89	65	44.5	238.5	173.5	234.5	68	124	24	M16	170	299	60	92	112	20	123	100	8.5	M12	58	200	7
M1-630H	210	140	274.3	385		109	145.8	28.7	12.5	6	154	69.5	105	65.5	44.5	238.5	210	242.5	87	87	24	M16	176.5	302	88	88	104	20	142	90	10	M12	70	204	7
M1-800M	210	140	274.3	385		109	145.8	28.7	12.5	6	154	69.5	105	65.5	44.5	238.5	210	242.5	87	87	24	M16	176.5	302	88	88	104	20	142	90	10	M12	70	204	7
M1-800H	210	140	274.3	385		109	145.8	28.7	12.5	6	154	69.5	105	65.5	44.5	238.5	210	242.5	87	87	24	M16	176.5	302	88	88	104	20	142	90	10	M12	70	204	7
M1-1250M	210	140	330			152	185	41		15								299	98	158													70	229	9
M1-1250H	210	140	330			152	185	41		15								299	98	158													70	229	9
M1-1600H	210	140	330			152	185	41		15								299	98	158													70	229	9

H

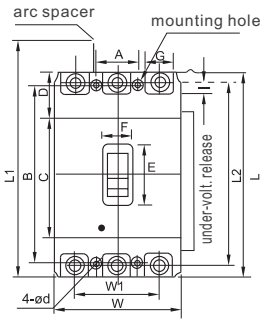
M1-63 ~ 630M Outline and Installation Dimensions

◇ Front Panel Connection

2P



3P



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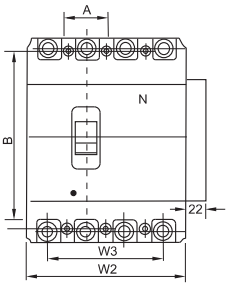
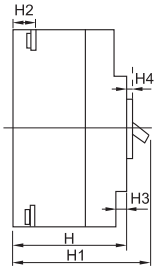
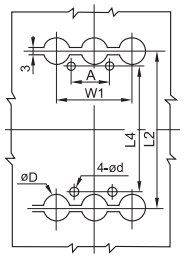




◇ Back Panel Connection

3P



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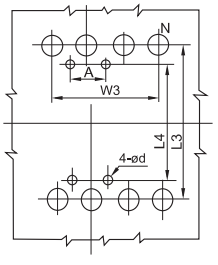
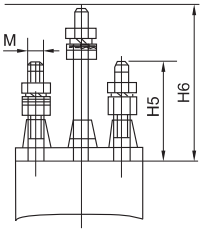
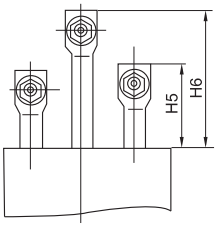
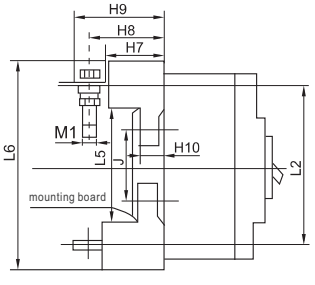
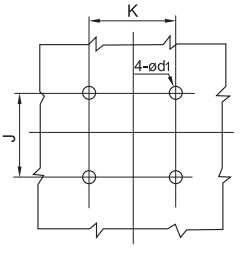






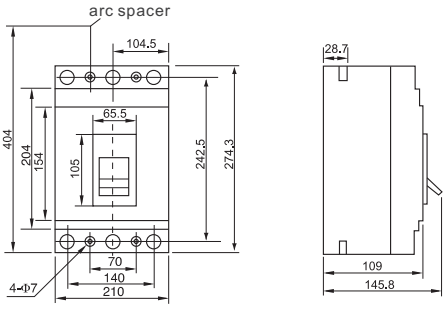
◇ Plug-in Connection



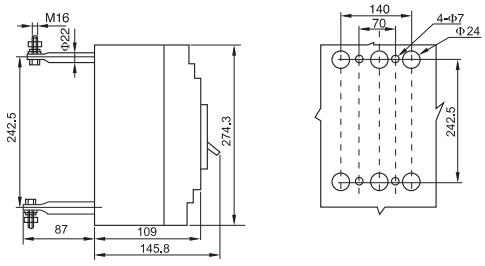


M1-630H ~ 800 Outline and Installation Dimensions

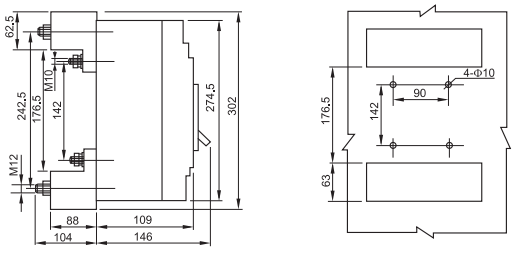
◇ Front Panel Connection (3P)



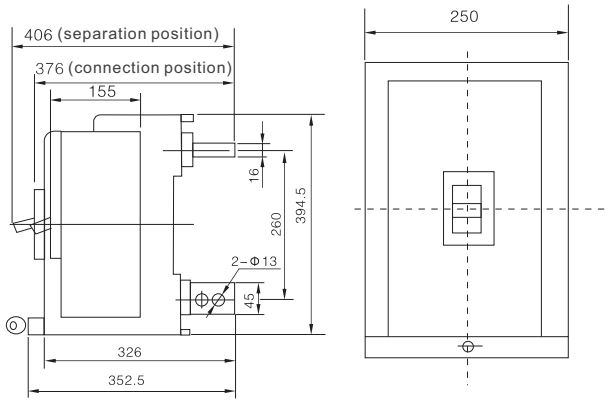
◇ Back Panel Connection (3P)



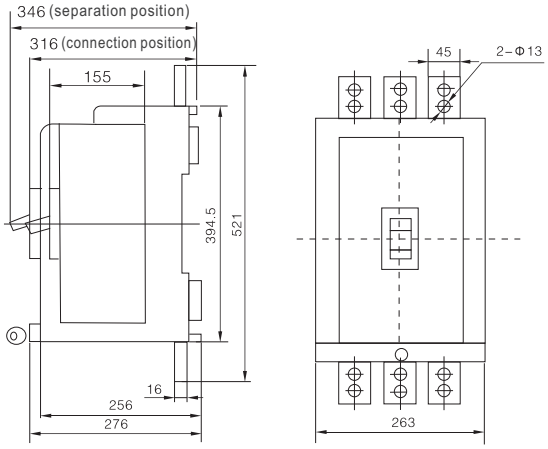
◇ Plug-in Connection (3P)



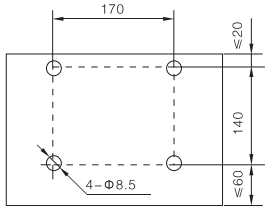
M1-1250 ~ 1600 Outline and Installation Dimensions



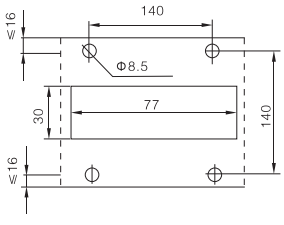
Rear Outgoing Line



Up/Down Outgoing Line



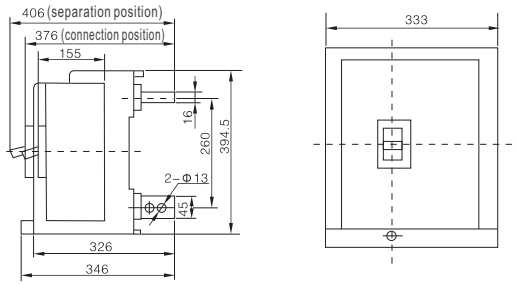
Base Installation Dimensions



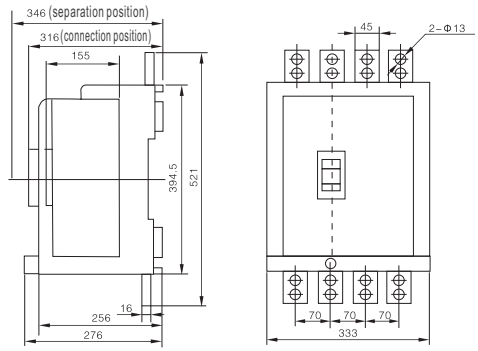
Back Installation Dimensions

H

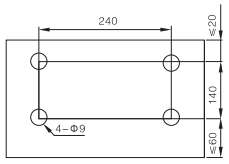
M1-1250 ~ 1600 Outline and Installation Dimensions



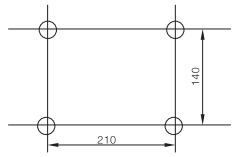
Rear Outgoing Line



Up/Down Outgoing Line

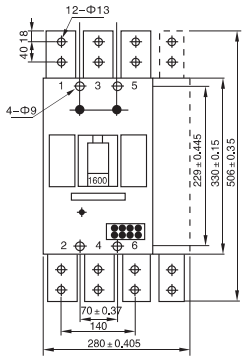


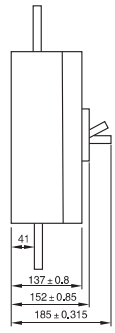
Base Installation Dimensions

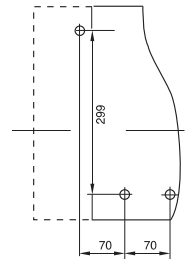


Back Installation Dimensions

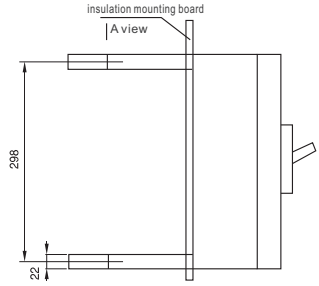
◇ Front Panel Connection

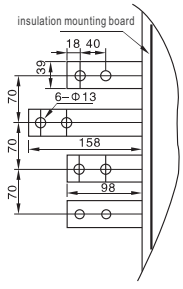


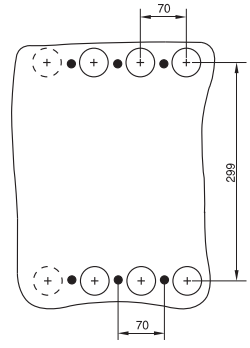




◇ Back Panel Connection



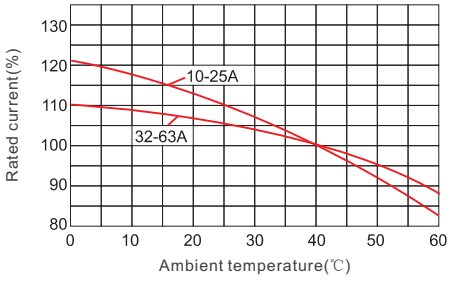




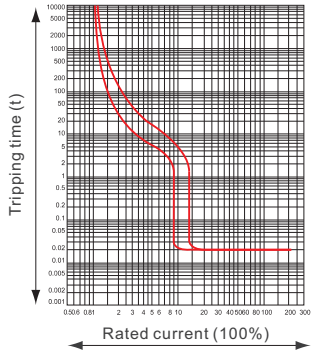
M1 series
Moulded Case Circuit Breaker

Characteristics Curves

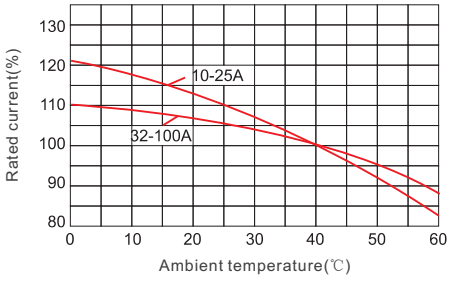
◇ Current and Temperature Curve



◇ M1-63L/M



◇ Current and Temperature Curve



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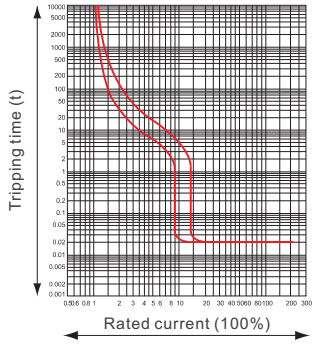
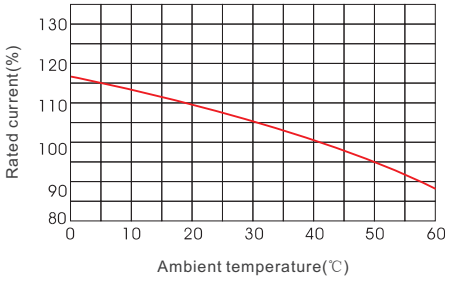


◇ Current and Temperature Curve



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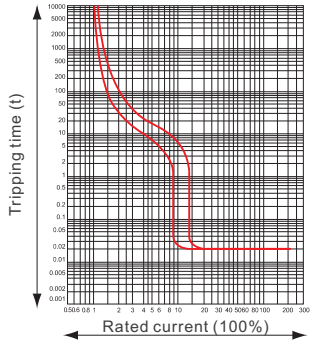
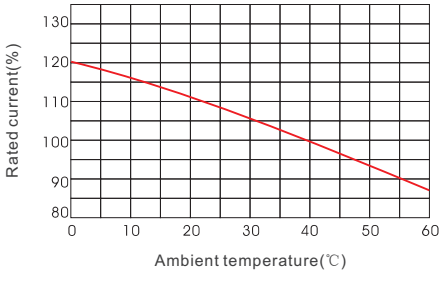


◇ Current and Temperature Curve



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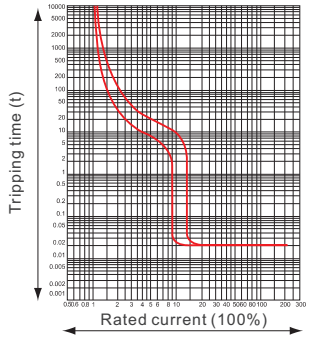
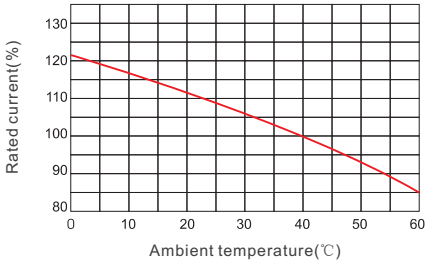


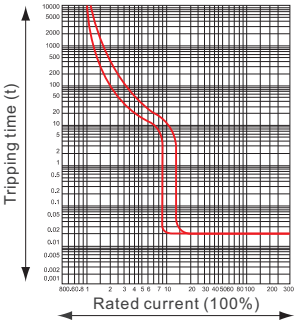
H

Characteristics Curves

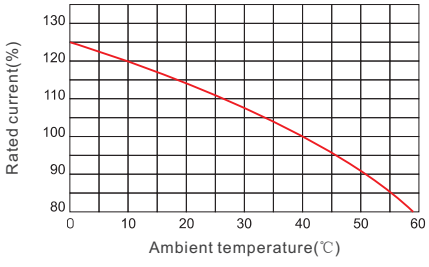
◇ Current and Temperature Curve



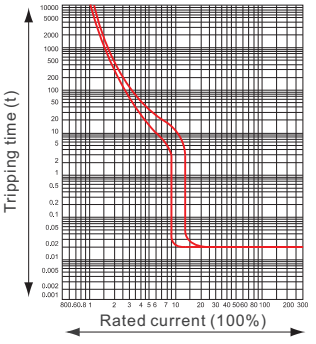
◇ M1-630L/M



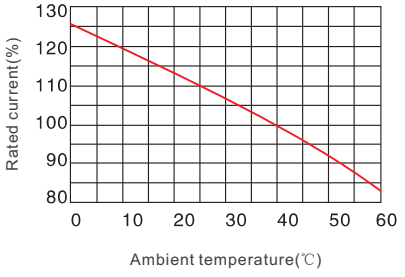
◇ Current and Temperature Curve



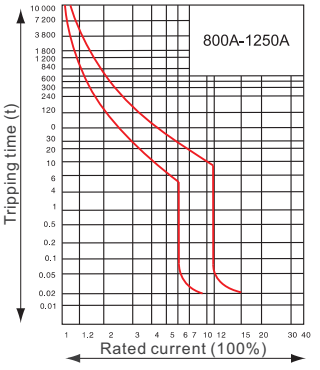
◇ M1-630H, 800M/H



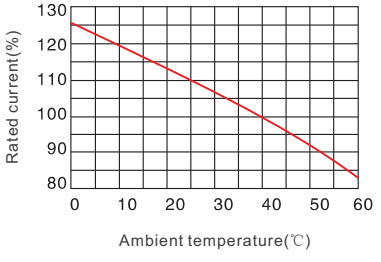
◇ Current and Temperature Curve



◇ M1-1250



◇ Current and Temperature Curve



◇ M1-1600